

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number
WO 2005/089760 A1

(51) International Patent Classification⁷: **A61K 31/47**,
C07D 207/48, 215/26, 215/60

(21) International Application Number:
PCT/EP2005/003144

(22) International Filing Date: 24 March 2005 (24.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
04007045.0 24 March 2004 (24.03.2004) EP

(71) Applicant (for all designated States except US): **CHIESI FARMACEUTICI S.P.A.** [IT/IT]; Via Palermo, 26/A, I-43100 Parma (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PIVETTI, Fausto** [IT/IT]; Via Palermo, 26/A, I-43100 Parma (IT). **PIGHI, Roberto** [IT/IT]; Via Palermo, 26/A, I-43100 Parma (IT).

(74) Agents: **MINOJA, Fabrizio** et al.; Bianchetti Bracco Minoja S.r.L., Via Plini, 63, I-20129 Milano (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

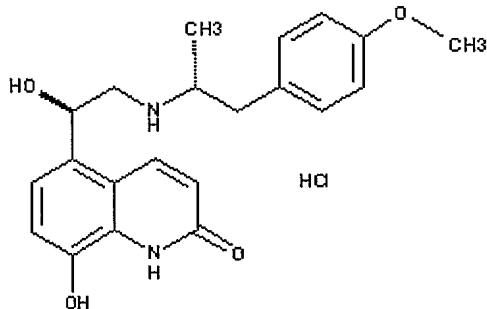
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: 8-HYDROXY-5-[(1-HYDROXY-2-[(1R)-2-(4-METHOXYPHENYL)-1-METHYLETHYL] AMINO][ETHYL]-2(1H)-QUINOLINONE MONOHYDROCHLORIDE IN CRYSTALLINE FORM AND THE PROCESS FOR ITS PREPARATION



(I)

(57) Abstract: The invention relates to 8-hydroxy-5- [(1 R)-1-hydroxy-2[[[(1R)-2-(4-methoxyphenyl)-1-methyl ethyl] amino] ethyl] -2 (1 H)-quinolinone monohydrochloride of formula (I) in crystalline form, provided with suitable characteristics in order to be used for the preparation of pharmaceutical compositions for inhalation in combination with suitable carriers or vehicles and the process for its preparation.

WO 2005/089760 A1